Implementing The QDR: MDA And Capability-Based Acquisition

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Director
Missile Defense Agency

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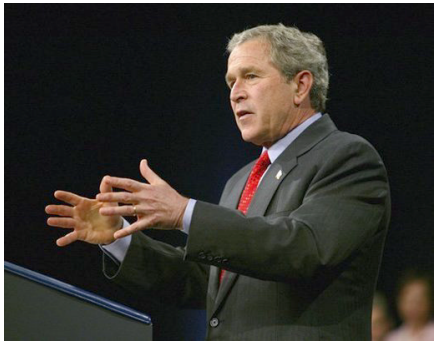
Ballistic Missile Defense Policy And Mission

Policy

"… The United States plans to begin deployment of a set of missile defense capabilities in 2004. These capabilities will serve as a starting point for fielding improved and expanded missile defense capabilities later."

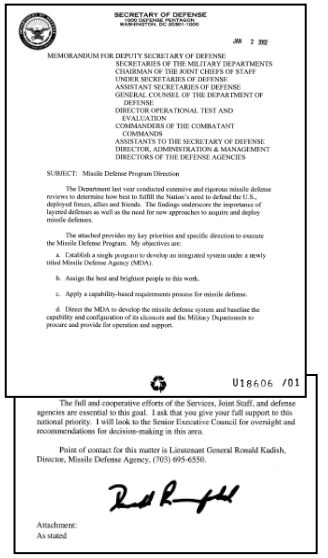
White House Fact Sheet National Policy on Ballistic Missile Defense, 20 MAY 03



Direction

- Establish a single program to develop an integrated system under a newly titled Missile Defense Agency
- Apply a capability-based requirements process for missile defense

SecDef Memorandum Missile Defense Program Direction, 2 JAN 02



SECRETARY OF DEFENSE
1000 DEFENSE PENTAGON
WASHINGTON, DC 20301-1000

JAN 2 2002

MEMORANDUM FOR DEPUTY SECRETARY OF DEFENSE
SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR OPERATIONAL TEST AND EVALUATION
COMMANDERS OF THE COMBATANT COMMANDS
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION & MANAGEMENT
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Missile Defense Program Direction

The Department last year conducted extensive and rigorous missile defense reviews to determine how best to fulfill the Nation's need to defend the U.S., deployed forces, allies and friends. The findings underscore the importance of layered defenses as well as the need for new approaches to acquire and deploy missile defenses.

The attached provides my key priorities and specific direction to execute the Missile Defense Program. My objectives are:

a. Establish a single program to develop an integrated system under a newly titled Missile Defense Agency (MDA).

b. Assign the best and brightest people to this work.

c. Apply a capability-based requirements process for missile defense.

d. Direct the MDA to develop the missile defense system and baseline the capability and configuration of its elements and the Military Departments to procure and provide for operation and support.

U18606 /01

The full and cooperative efforts of the Services, Joint Staff, and defense agencies are essential to this goal. I ask that you give your full support to this national priority. I will look to the Senior Executive Council for oversight and recommendations for decision-making in this area.

Point of contact for this matter is Lieutenant General Ronald Kadish, Director, Missile Defense Agency, (703) 695-6550.

Attachment:
As stated

Mission

- Develop an integrated layered Ballistic Missile Defense System
  - To defend the United States, its deployed forces, allies and friends
  - From ballistic missiles of all ranges
  - Capable of engaging them in all phases of flight

Integrated Ballistic Missile Defense System

Sensors

Defense Support Program

Space Tracking And Surveillance System

Sea-Based Radars

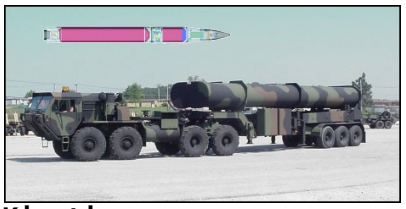
Forward-Based Radar

Early Warning Radar

Boost Defense Segment

Midcourse Defense Segment

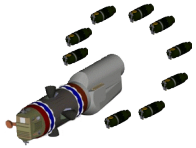
Terminal Defense Segment



Kinetic Energy Interceptor

Airborne Laser

Aegis Ballistic Missile Defense / Standard Missile-3



Multiple Kill Vehicle

Ground-Based Midcourse Defense

Terminal High Altitude Area Defense

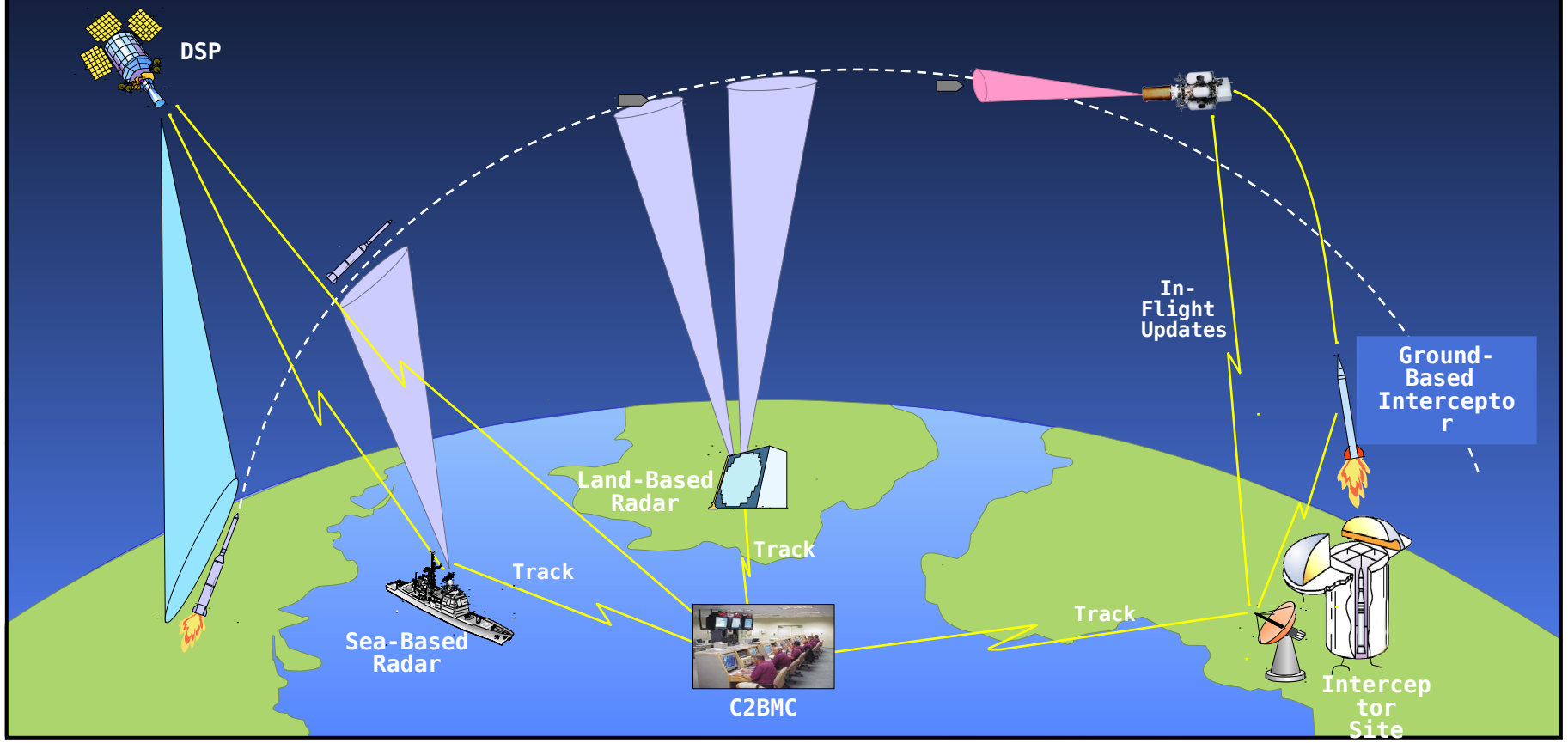
Patriot Advanced Capability -3

Command, Control, Battle Management & Communications

USSTRATCOM | USPACOM | USNORTHCOM | NMCC

An Integrated Approach To Missile Defense

ition sensor = provides info to cue downrange sensors
commit sensor = provides sufficient track info to launch inter
guidance sensor = provides final track update for interceptor



Non-Traditional Acquisition

- MDA has adopted a Capability-based Acquisition Strategy
  - Requirements are based on evolving threat uncertainty, not precise predictions
  - Incorporates an interactive, collaborative approach
  - Focus is on fielding early capability with military utility
- Spiral development calls for continuous upgrades
  - Short timeframes do not lock on a final grand design
  - Periodic continuation reviews with flexible contracts reduce incentives for unrealistic expectations

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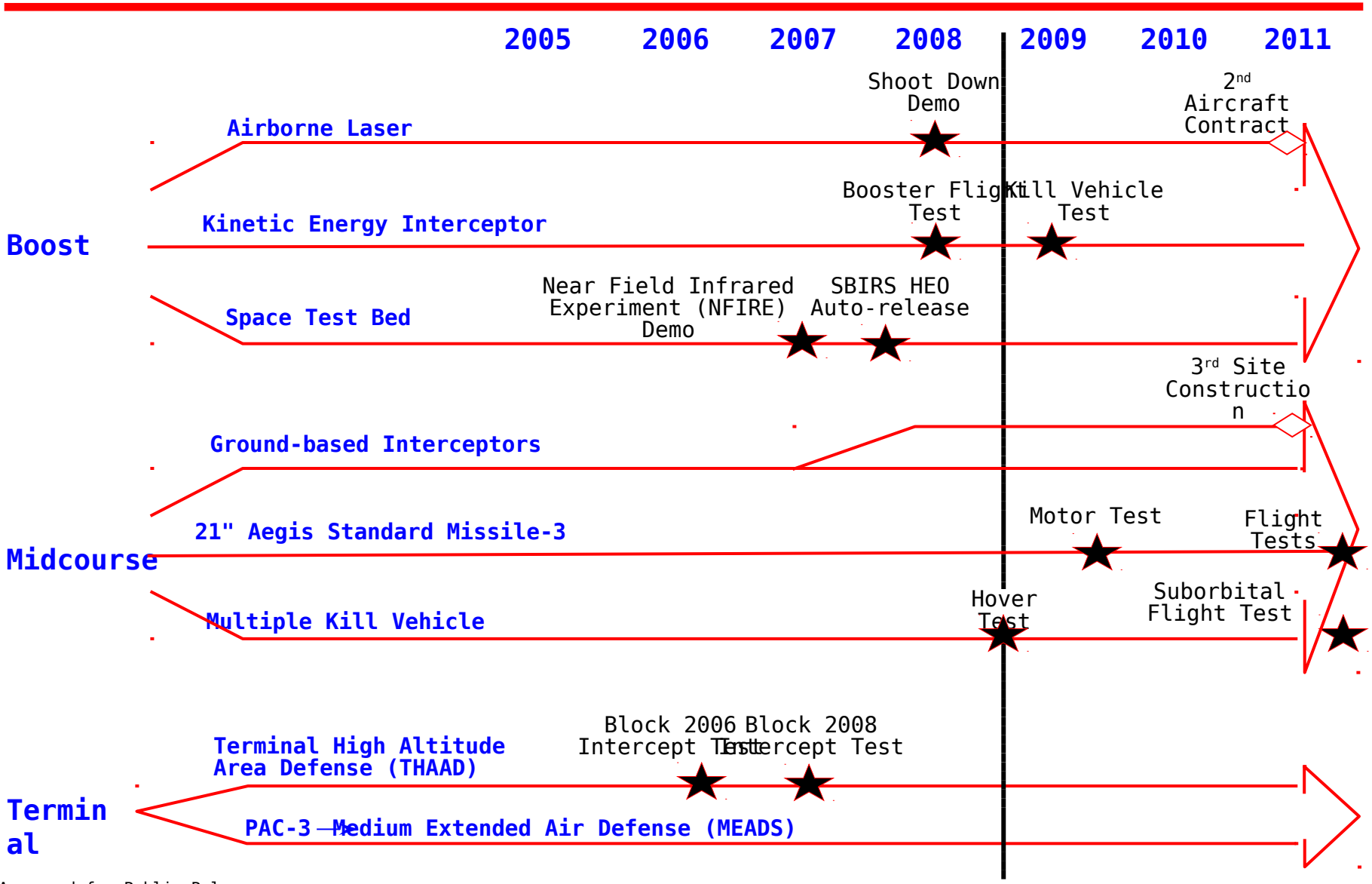
BMDS Knowledge Points



MDA Is Aligned With QDR "Institutional Reform & Governance" Execution Roadmap

- ✓ **Horizontal organizations to integrate priority areas**
  - Existing organization already flat and horizontally integrated to a great extent
  - Reengineering will improve integration with Centers of Excellence
- ✓ **Portfolio-based approach to planning, programming and budgeting**
  - BMD is a ≈$10B/year portfolio
  - SecDef January 2002 Program Direction
  - Working with STRATCOM, and using the tools below, we make trades within the portfolio to field the most effective combination of missile defense capabilities
- ✓ **Common data structures / approaches at enterprise level**
  - BMDS Systems Engineering process
  - C2BMC
- ✓ **New acquisition policies, procedures and processes for dramatic improvement**
  - Capabilities-based acquisition
  - Spiral development
  - Knowledge-based approach

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QDR

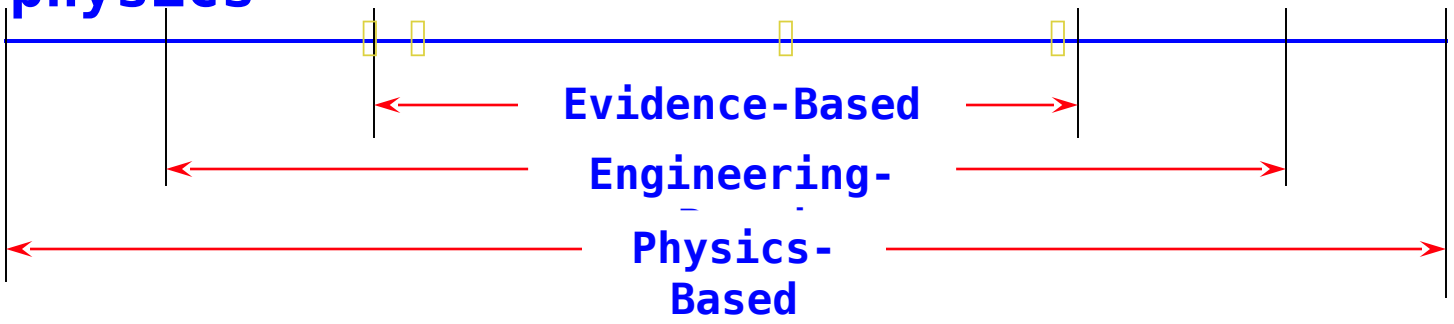
The QDR defines two imperatives for DoD

- **"Continuing to reorient the Department's capabilities and forces to be more agile …, to prepare for wider asymmetric challenges and to hedge against uncertainty over the next 20 years.**
- **"Implementing enterprise-wide changes to ensure that organizational structures, processes and procedures effectively support its strategic direction."**

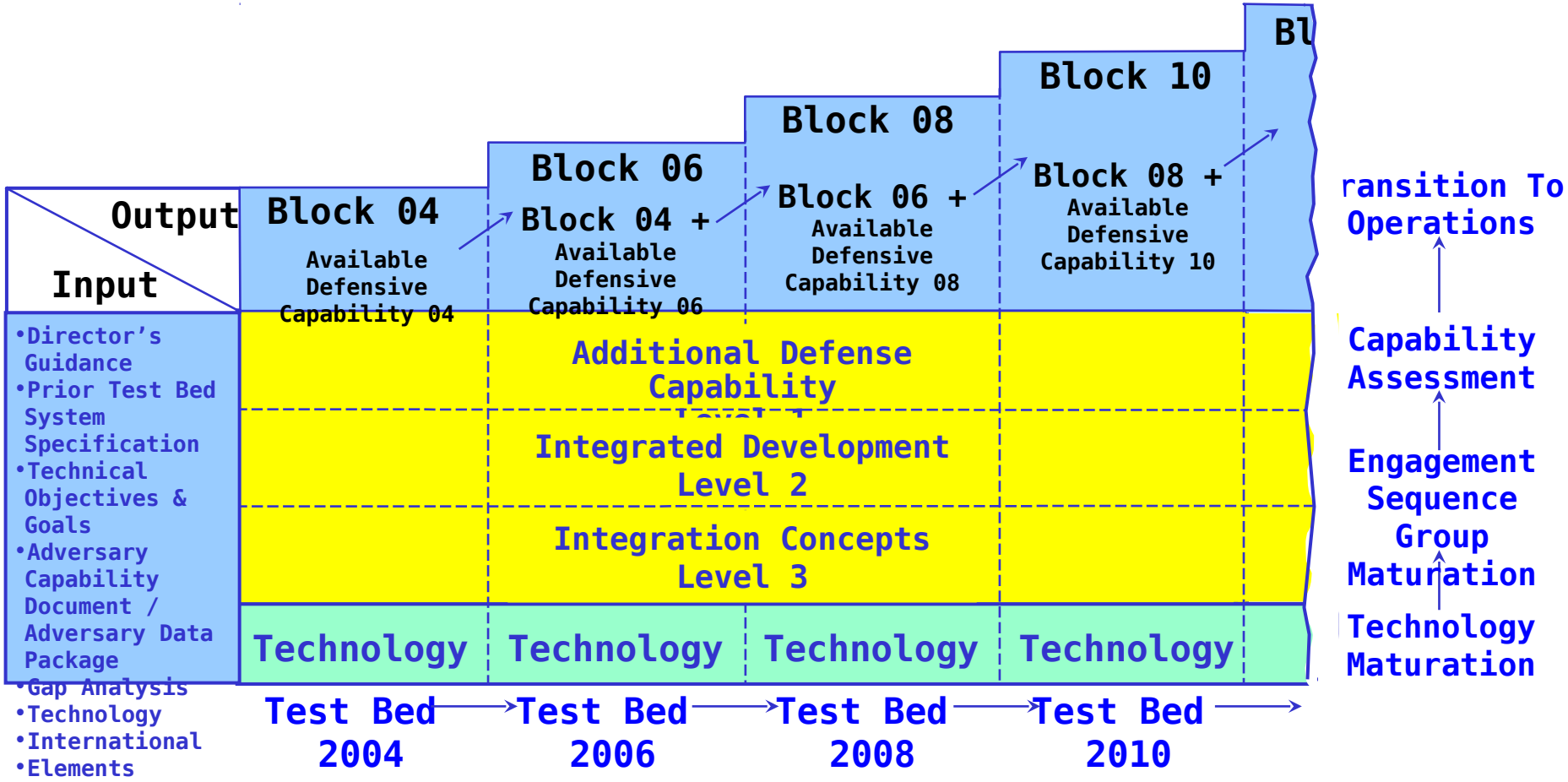
Quadrennial Defense Review, 6 FEB 06

Setting Requirements To Meet Uncertainty

- Requirements are based on capabilities adversaries could have in the future, rather than trying to define what they will possess
  - Review available observable, evidence-based (intel-based) parameters to set bounds
  - Estimate design space variations based on what is technically feasible to set the engineering bounds
  - Maximum bounds are based on the laws of physics



Evolutionary BMDS Test Bed Framework



he Test Bed Framework Provides For Robust Capability Maturat